NEWARK BAY STUDY AREA
PRP DATA EXTRACTION FORM

Central Steel Drum Company, Inc. Newark, New Jersey Site

CANDIDATE PRP(S):

In 1997, the United States Environmental Protection Agency ("USEPA") sent "Request for Information Pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e)" letters to over 300 parties in order to determine if they had transacted any business with the Central Steel Drum Company for the disposal, treatment or storage of any drums or other containers. Responses indicated that the entities listed below sent drums to the Central Steel Drum facility; and those with an asterisk (*) are associated with specific hazardous substances as discussed hereafter in this Data Extraction Form ("DEF").

- Akzo Nobel Coatings, Inc. (successor to Reliance Universal, Inc.)*
- American Inks & Coatings Corporation
- Armstrong World Industries, Inc.*
- American National Can Group, Inc. (successor to American National Can Company)
- APOLAN International, Inc. (f/k/a Atlantic Polymers & Products, Inc.)*
- BASF Corporation
- Borden & Remington Corp.*
- Borden Chemical, Inc.*
- Chiyoda America Inc.*
- Ciba Specialty Chemicals Holding Inc. (for Ciba Geigy Corporation, Pigments Division)*
- Congoleum Corporation*
- Del Val Ink & Color, Inc.*
- Houghton International Inc. (f/k/a E.F. Houghton & Co., Inc.)
- Flint Group Germany GmbH (for Flint Ink Corporation)
- Georgia-Pacific Corporation (successor to Fort James Corporation for CZ Inks)*
- Mace Adhesives & Coating Co., Inc.*
- INX International Ink Co. (successor to Midland Color Co.)*
- Minnesota Mining & Manufacturing Co. (3M)*
- Sun Chemical Corporation (for Converters Ink Company, General Printing Ink and US Ink)*
- Valspar Corporation (successor to Lilly Industries, Inc. for Guardsman Products, Inc.)
- R.T. Vanderbilt Company, Inc. (for Vanderbilt Chemical Corporation)*

BBH000001, BBH000004, BBH000005, BBH000006, BBH000007, BBH000008, BBH000009, BBH000010, BBH000011, BBH000012, BBH000013, BBH000014, BBH000015, BBH000016, BBH000017, BBH000018, BBH000019, BBH000020, BBH000021, BBH000022, BBH000023, BBH000024

Other evidence reviewed to date indicates The Sherwin Williams Company sent drums to the Central Steel Drum Company and should be considered a PRP. BBG000037, BBG000120

CURRENT MAILING ADDRESS/CONTACT INFO FOR PRP(S):

PRPs known associated with specific hazardous substances at the Site:

Akzo Nobel Coatings, Inc.
Robert J. (Bob) Margevich
1313 Windsor Avenue
Columbus, OH 43216

Armstrong World Industries, Inc.
Michael D. Lockhart, Chairman & CEO
2500 Columbia Avenue
Lancaster, PA 17604

APOLAN International
Peter Graefe, President
P.O. Box 790
Oakhurst, NJ 07755

Borden & Remington Corp.
Daniel Bogan, President and CEO
63 Water Street
Fall River, MA 02721

Borden Chemical, Inc.
Craig O. Morrison, President and CEO
180 E. Broad Street
Columbus, OH 43215

Chiyoda America Inc.
John S. Sato, President
378 Thousand Oaks Boulevard
Morgantown, PA 19543

Ciba Specialty Chemicals Holding Inc.
Armin Meyer, Chairman
540 White Plains Road
Tarrytown, NY 10591

Congoleum Corporation
Roger S. Marcus
3705 Quakerbridge Road
Mercerville, NJ 08619

Del Val Ink and Color Incorporated
Frank A. Hamel, Jr., President
1301 Taylor's Lane
P.O. Box 155
Cinnaminson, NJ 08077

Georgia-Pacific Corporation
James (Jim) Hannan, President, CEO and COO
133 Peachtree Street NE
Atlanta, GA 30303

Mace Adhesives and Coatings Co., Inc.
James F. Gilloran, President
38 Roberts Road
P.O. Box 37
Dudley, MA 01571

INX International Ink Co.
Rick Clendenning, President
150 N. Martingale Road
Schaumburg, IL 60173

Minnesota Mining & Mfg. Co. (3M)
George W. Buckley, Chairman, President and CEO
3M Center
St. Paul, MI 55144

The Sherwin Williams Company
John G. Morikis, President and COO
101 Prospect Avenue NW
Cleveland, OH 44115

BBI000001, BBI000003, BBI000005, BBI000007, BBI000008, BBI000009, BBI000010, BBI000011, BBI000012, BBI000015, BBI000016, BBI000018, BBI000019, BBI000020, BBI000022

PRPs associated with the Site but specific hazardous substances not yet identified:

American Inks and Coatings Corp.
William P. Rimel, III, President and CEO
P.O. Box 803
Valley Forge, PA 19482
330 Pawling Road
Phoenixville, PA 19460

American National Can Group, Inc.
Curtis J. Clawson, President and COO
8770 West Bryn Mawr Avenue
Chicago, IL 60631

BASF Corporation
Kurt W. Bock, Chairman and CEO
100 Campus Drive
Florham Park, NJ 07932

Houghton International Inc.
William F. (Bill) MacDonald, Jr., Chairman, President and CEO
Madison and Van Buren Avenues
Valley Forge, PA 19482

Flint Group Germany GmbH
Michael J. Gannon, President and COO
14909 Beck Road
Plymouth, MI 48170

The Valspar Corporation
William L. (Bill) Mansfield, Chairman, President and CEO1101 3rd Street South
Minneapolis, MN 55415

BBI000002, BBI000004, BBI000006, BBI000013, BBI000014, BBI000017, BBI000021

FACILITY ADDRESS:

The street address of the former Central Steel Drum Company, Inc. ("CSD") site (the "Site") is:

704-738 Doremus Avenue
Newark, Essex County, New Jersey 07105

Also reported as:

843-871 Delancy Street
Newark, Essex County, New Jersey 07105

The Site is comprised of a tract of land, approximately 8.5 acres in size, identified as Block 5074, Lot 1 on the City of Newark, NJ tax map. The Site, located at the corner of Doremus Avenue and Delancy Street, is bounded by Delancy Street and the Motiva Enterprises Newark Terminal petroleum storage facility to the north; the Propane Power Corporation to the northeast and east, along with the Newark Police Firearms Training Facility, Ironbound Intermodal Industries and the Hess Newark Terminal; a Conrail right-of-way and railroad tracks, Doremus Avenue and the Passaic Valley Sewerage Commissioners ("PVSC") treatment plant to the west-northwest; and an unnamed drainage ditch and a commuter/freight railroad yard and rail lines to the south-southwest. The drainage ditch extends along the south end of the Site from Doremus Avenue eastward for approximately 2,300 feet to Newark Bay. BBG000111, BBG000129, BBG000133, BBG000188, BBG000192

The location of the drainage ditch, as taken from NJDEP 2000 Orthophotographs, is depicted on the following aerial photograph. Historical drainage, as taken from 1941 and 1956 Essex County Mosquito Extermination Commission maps, is also shown on the aerial photograph. BBG000192, BBJ000001, BBJ000002

The approximate locations of the Site and drainage features are shown on the following annotated aerial photograph:

Central Steel Drum Company, Inc.
704 Doremus Avenue
Newark, Essex County, New Jersey

Aerial Photograph Copyright 2008
Photo Source: Google Earth (Sanborn/Tele Atlas/State of NJ)

Site boundary line locations as shown are approximations

FINANCIAL VIABILITY (annual revenue, # of employees)**:**

CSD filed for bankruptcy in January 1993 and discontinued incineration operations at the Site in February 1994. BBG000054, BBH000002

USEPA conducted an emergency removal action at the Site from October 1997 to January 1998, which included the removal of thousands of drums, ash piles, debris, asbestos, and visibly contaminated surface soils. In November 1997, USEPA sent "Request for Information Pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e)" letters to over 300 parties in order to determine if they had transacted any business with CSD for the disposal, treatment or storage of any drums or other containers. As discussed in the previous Candidate PRP(s) section, numerous parties were identified as having sent drums to the CSD facility. To date, however, there appears to have been no cost recovery efforts by EPA against any of those PRPs who sent drums and hazardous substances to the Site. BBH000001

The Candidate PRPs identified above all appear to be existing, operating entities. BBI000001, BBI000002, BBI000003, BBI000004, BBI000005, BBI000006, BBI000007, BBI000008, BBI000009, BBI000010, BBI000011, BBI000012, BBI000013, BBI000014, BBI000015, BBI000016, BBI000017, BBI000018, BBI000019, BBI000020, BBI000021, BBI000022

DATES OF OPERATION (include info. on predecessors/successors if known)**:**

Available information documents the following key dates in the corporate successorship and the history of the operations at the CSD Site:

- 1902-1922: The Site was originally occupied by The Land Filling & Improvement Company.

- 1922-1951: The Site was occupied by a number of ink manufacturing concerns, including International Inks, Inc., The International Printing Ink Corporation, Philip Ruxton, Inc., and Interchemical Corporation.

- 1951-1952: In 1951, the Site was purchased from Interchemical Corporation by Bessie Baron, Mollie Ratner, Dorothy Greenberg, and Ruth Greenberg.

  Leo Baron, Bessie Baron's husband, began operating a drum reconditioning facility under the name Central Steel Drum Company on the Site in 1952.

- 1965-1968: In April 1965, Baron, Ratner and the Greenbergs incorporated Dore Realty Company, Inc. ("Dore Realty"), with themselves as principals, and transferred ownership of the Site to Dore Realty.

  In 1966, CSD was incorporated in the State of New Jersey and a group headed by Abbie Greenberg (Ruth Greenberg's husband) acquired the operations and the name Central Steel Drum Company from Leo Baron. CSD leased the Site from Dore Realty.

  In July 1966, Bessie Baron, Dorothy Greenberg, Mollie Ratner, Ruth

Greenberg and Abbie Greenberg purchased the Site from Dore Realty. On that same day, Dore Realty was dissolved. As a result, CSD leased the Site from Baron, Ratner, and the Greenbergs.

In July 1968, Bessie Baron, Mollie Ratner, and Dorothy Greenberg bought out Abbie and Ruth Greenberg's shares of the Site and retained full ownership of the Site.

Subsequently (the exact date unknown) the group headed by Abbie Greenberg conveyed the CSD operations to a group identified as: Allen Fischer, President; Gerry Greenberg (Dorothy Greenberg's son) and Edward Fischer, Vice-Presidents; Neil Fischer, Secretary; and Jeffrey Skuraton, Treasurer.

- 1979-1985: In 1979, NJDEP became involved with the Site when the Department received an anonymous complaint of illegal waste disposal practices at the Site, namely the burying of incinerator ash at the back of the Site. NJDEP began Site inspections in 1980 that continually disclosed full drums on-Site, numerous spills on the ground, poor operating practices, and generally sloppy housekeeping. From that time forward, NJDEP issued numerous Notices of Violation, Administrative Orders, and Administrative Penalties to CSD for violations noted during Site inspections; however, none of the penalties were paid.

  In March 1980, CSD was issued a Notice of Prosecution by NJDEP for engaging in the unauthorized disposal of solid waste (incinerator ash), specifically chemical waste, on Site.

  In 1983, NJDEP referred CSD to Criminal Justice for a criminal investigation and to the Attorney General for an injunction against CSD for numerous violations of the Solid Waste Management Act.

  On November 25, 1983, EPA issued CSD a Consent Agreement and Final Compliance Order for a number of RCRA violations, and required an investigation into Site contamination and the development of a remediation program under the direction of NJDEP. This case subsequently became inactive in 1985.

- 1988: In 1988, Jane Ratner-Mattson and Marian Ratner-Abrams inherited Mollie Ratner's shares in the Site.

- 1993: On January 7, 1993, NJDEP entered into a Judicial Consent Order ("JCO") with Central Steel Drum, Dorothy Greenberg, Bessie Baron, Jane Ratner-Mattson, and Marian Ratner-Abrams for the remediation of all pollution at, or emanating from, or previously emanating from, CSD's drum reconditioning facility.

  On January 11, 1993, CSD filed a Petition for Reorganization under Chapter 11 of the Bankruptcy Code.

- 1994: On February 10, 1994, NJDEP enter into an Amended JCO with Central Steel Drum, et al that required CSD to completely cease its drum incinerating operations at the Site as a result of numerous Air Pollution Control Act violations.

  CSD shut down the incinerator operations on February 16, 1994; however, the plant continued partial operations, processing inventory through April 1, 1994.

  CSD and the property owners abandoned the Site sometime in 1994.

- 1996-1998: In October 1996, the City of Newark foreclosed on the Site due to tax default.

  USEPA conducted an emergency removal action at the Site from October 1997 to January 1998, which included the removal of thousands of drums, ash piles, debris, asbestos, and visibly contaminated surface soils. No subsurface soil or groundwater remediation was conducted during the removal action. At the conclusion of EPA's activities, control of the Site was returned to the City of Newark.

  In November 1997, USEPA sent "Request for Information Pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e)" letters to over 300 parties in order to determine if they had transacted any business with the Central Steel Drum Company for the disposal, treatment or storage of any drums or other containers.

  The City of Newark signed a Memorandum of Agreement ("MOA") with NJDEP, effective June 15, 1998, to conduct a remedial investigation as part of their continuation of the Brownfields redevelopment initiative at the Site.

- 2006: The City of Newark adopted a Resolution on October 4, 2006 designating Glopak Corporation as the redeveloper of the Site.

BBG000022, BBG000054, BBG000106, BBG000133, BBG000141, BBG000147, BBG000154, BBG0000155, BBG000156, BBG000167, BBG000174, BBG000184, BBG000188, BBG000195, BBG000222, BBG0000225, BBG000227, BBH000001, BBH000002, BBH000003

DESCRIPTION OF FACILITY OPERATIONS (list CERCLA hazardous substances used, manufactured or present)**:**

CSD's operations consisted of the reconditioning of steel drums that contained residues of paints, foods, organic and inorganic chemicals including hazardous substances. Operations involved storage of drums, drum incineration (to burn residues and paint), sand blasting, and painting of drums. CSD received used drums, reportedly many still containing wastes, from various industries, including the food, paint, adhesives, and ink industries. CSD processed approximately 3,000 thirty- and fifty-five-gallon drums per day, and daily received used drum shipments of varying quantities. NJDEP noted in the 1993 JCO that it is estimated that there had

been as many as 35,000 to 60,000 drums on Site at any one time. CSD claimed that it was their business practice to accept only "empty drums" – those containing 1 inch or less of residue. However, USEPA and NJDEP inspections have documented the acceptance and presence of partially and completely full drums. BBG000111, BBG000133, BBG000167

The following hazardous substances and materials (without limitation) have been associated with the noted PRPs:

- 1,4-Butanediol [APOLAN Intl.]
- 2-Ethylhexanol [Armstrong World Industries]
- 1-Methoxy-2-acetoxypropane [Akzo Noble Coatings]
- 1,1,1-Trichloroethane [Armstrong World Industries]
- 1,2,4-Trimethylbenzene [Akzo Nobel Coatings]
- Acetone [Borden & Remington, Del Val Ink]
- Aluminum sulfate [Ciba Specialty Chemicals]
- Butyl benzyl phthalate {Armstrong World Industries]
- Chlorobenzene [Armstrong World Industries]
- Chlorinated polyolefin [Armstrong World Industries]
- Chlorinated solvent based inks (1,1,1-trichloroethane, cyclohexanone and other ingredients) [Congoleum Corp.]
- Dibutyl amine [R.T. Vanderbilt]
- Dibutyl phthalate [Del Val Ink]
- Diisobutylamine [R.T. Vanderbilt]
- Diphenylmethane diisocyanate [APOLAN Intl.]
- Ethanol [Borden Chemical, Mace Adhesives, INX]
- Ethylbenzene [Del Val Ink, 3M]
- Ethylene glycol [R.T. Vanderbilt]
- Ethylene glycol butyl ether [Akzo Nobel Coatings]
- Hexane [R.T. Vanderbilt]
- Isopropanol [Borden Chemical, INX]
- Isopropyl alcohol [Akzo Nobel Coatings, Congoleum Corp., Mace Adhesives, R.T. Vanderbilt]
- Manganese compounds [INX]
- Methanol [R.T. Vanderbilt]
- Methylene Chloride [Borden & Remington, R.T. Vanderbilt]
- Methyl ethyl ketone ("MEK") [Congoleum Corp., Borden & Remington, Borden Chemical, Chiyoda America, Mace Adhesives, 3M, Sun Chemical, R.T. Vanderbilt]
- MEK solvent based inks (MEK, cyclohexanone and other ingredients) [Congoleum Corp.]
- Octylphenoxypolyethoxyethanol [Armstrong World Industries]
- Pentanedioic acid (dimethyl glutarate) [Ciba Specialty Chemicals]
- Petroleum distillates [INX]
- Plasticizer (butyl benzyl phthalate) [Congoleum Corp.]
- Polyvinyl chloride resins [Congoleum Corp.]
- Solvent- and water-based inks [Georgia-Pacific]
- Solvents (acetates and alcohols) [Georgia-Pacific, Sun Chemical]
- Tetra hydro furan [Congoleum Corp.]

- Toluene [Congoleum Corp., Borden & Remington, Chiyoda America, Del Val Ink, Mace Adhesives, 3M, Sun Chemical]
- Vyns-3 (vinyl chloride, vinyl acetate) [Congoleum Corp.]
- Water based inks (latex, isopropyl alcohol and other ingredients) [Congoleum Corp.]
- Xylene [Akzo Nobel Coatings, Armstrong World Industries, Borden & Remington, Chiyoda America, Del Val Ink, 3M]

BBH000004, BBH000006, BBH000008, BBH000010, BBH000011, BBH000012, BBH000013, BBH000014, BBH000015, BBH000018, BBH000019, BBH000024

The drum recycling process consisted of flipping the drums over and allowing the contents to drain on the ground, and then placing the inverted drums on a conveyor line that moved them through the drum incinerator, where the residues inside the drums were burned at approximately 2,000^{o}F. As a result of the incineration process, a sludge was generated that was accumulated by a scraper belt into an open bin. Sludge not removed by the scrapers was removed by hand and put into drums. The bin and drum contents were then put into the sludge incinerator where they were heated to a temperature range of 2,000^{o}F to 2,600^{o}F for 8 hours. The resultant ash was accumulated in piles 4 to 5 feet high and 15 feet in diameter, with no protection from wind or rain. Some of the ash was transported off-Site, but most of it was broadcast throughout the Site to fill in potholes and the wetland areas near the drainage ditch. BBG000111, BBG000133, BBG000167

The incinerator residue (ash) was analyzed in 1981 and found to contain the following inorganic/metal contaminants at the levels indicated:

- Arsenic at 2.86 parts per million ("ppm")
- Barium at 610 ppm
- Cadmium at 48.3 ppm
- Chromium at 870 ppm
- Copper at 6,165 ppm
- Lead at 9,000 ppm
- Mercury at 0.093 ppm
- Molybdenum at 922 ppm
- Nickel at 120 ppm
- Selenium at 0.093 ppm
- Silver at 0.083 ppm

BBG000120

In 1979, NJDEP became involved with the Site when the Department received an anonymous complaint of illegal waste disposal practices at the Site, namely the burying of incinerator ash at the back of the Site. NJDEP began Site inspections in 1980 that continually disclosed full drums on-Site, numerous spills on the ground, poor operating practices, and generally sloppy housekeeping. From this time forward, NJDEP issued numerous Notices of Violation and Administrative Orders to, and levied Administrative Penalties upon, CSD for violations noted during Site inspections. BBG000195, BBG000227

In March 1980, CSD was issued a Notice of Prosecution by NJDEP for engaging in the unauthorized disposal of solid waste (incinerator ash), specifically chemical waste, on-Site. BBG000174

In 1981, USEPA conducted a Site inspection and noted the presence of full drums, spillage, and sloppy housekeeping. As a result, USEPA followed-up in 1982 with the issuance of a Complaint and Compliance Order relating to CSD's violation of RCRA, and its illegal treatment of incinerator ash and sludge. BBG000195

In 1983, NJDEP referred CSD to Criminal Justice for a criminal investigation, and to the Attorney General for an injunction against CSD for numerous violations of the Solid Waste Management Act. A 1990 New Jersey Division of Law memorandum indicated that the files did not contain the result of these referrals. BBG000195

In 1994, NJDEP shut the facility down as a result of Air Pollution Control Act violations, and CSD and the property owners abandoned the Site. NJDEP reported that approximately 50,000 gallons of hazardous waste in thousands of drums, many in deteriorating condition, were abandoned on-Site between the facility shut down in 1994 and the commencement of the USEPA emergency removal action in 1997. Some of the drums were located directly on the ground, while others were in abandoned truck trailers. BBG000133, BBG000141, BBG000188

In October 1996, the City of Newark foreclosed on the Site due to tax default. BBG000147

USEPA conducted an emergency removal action at the Site from October 1997 to January 1998, which included the removal of thousands of drums, ash piles, debris, asbestos, and visibly contaminated surface soils. No subsurface soil or groundwater remediation was conducted during the removal action. At the conclusion of USEPA's activities, control of the Site was returned to the City of Newark. BBG000133

The USEPA ID number for the Site is CERCLIS No. NJD011482577. The NJDEP Known Contaminated Sites List identification number for the Site is NJ011482577. BBG000022, BBG000181

The City of Newark signed a Memorandum of Agreement ("MOA") with NJDEP, effective June 15, 1998, to conduct a remedial investigation as part of the continuation of the Brownfields redevelopment initiative at the Site. BBG000022

The Site currently is vacant, except for the Main Building, and covered by gravel and weeds. The Main Building, which consists of several interconnected smaller buildings, was reported by NJDEP to contain numerous drains and to be in disrepair. BBG000133

An on-Site septic disposal system, installed prior to CSD's purchase of the Site in 1951, was used for the discharge/disposal of sanitary waste. BBD000004, BBG000227

The topography of the Site is relatively flat with drainage ditches to the east and south. Catch basins on the eastern portion of the Site reportedly discharged to the drainage ditch along the east side of the Site. Wetlands are present in the southern portion of the Site, and a tidally influenced drainage ditch is located to the south of the Site. Although the southern drainage ditch is outside the Site property boundaries, NJDEP reported that it contained rotting drums and received waste

liquids that ran off the Site. The drainage ditch discharges into Newark Bay approximately 2,300 feet east of the Site. BBG000141, BBG000192

On-Site Areas of Concern previously identified during Remedial Investigations conducted by the City of Newark, USEPA, and the NJDEP include the following:

- **Heavy Drum Storage Pad** - located in the southwest portion of the Site and consisted of a concrete pad, with a trench for the collection of residue. Drums containing over 1 inch of residue were stored in this area. The City of Newark's 2004 Remedial Investigation Report ("2004 RIR") stated that "[h]istorically drum contents were discarded in this area, including drums filled with unknown contents." The areas around the pad were unpaved and received surface water and stormwater runoff, which drained into the adjacent ditch.

- **Drum Conveyor/De-Heading Shed** – located northwest of the Main Building. Drums were placed on a conveyor, which entered the de-heading shed where the tops were removed. The 2004 RIR noted two sumps were present in this area, along with stained soil and residues from past operations.

- **Abandoned Truck Trailer Area** – located in the northern portion of the Site where truck trailers were parked, many of which contained unprocessed drums. This area had also been used for the storage of drums. According to the 2004 RIR, this area was potentially impacted by miscellaneous spills in the past, which have subsequently been covered with gravel.

- **Drum Flip Operation Area** – located east of the incinerator where drums were flipped onto a conveyor prior to incineration. The 2004 RIR noted that sludge material from the drums was allowed to spill onto the ground without any containment present. Incinerator ash was also stored in piles in this area.

- **Incineration Area** – located just east of the Main Building and contained the incinerator and dust collectors. South of the incineration area is a quenching sump, where drums where sprayed with water to remove excess residue.

- **Septic System** – located adjacent to the Main Building on the southwest side, below the former office trailers. The 2004 RIR indicated that prior to 1951, a septic system was used for the discharge/disposal of sanitary waste and that it was possible that chemicals were disposed in this septic system. The on-Site septic system was reported to still be in use in the 1990 Remedial Investigation Phase I workplan.

- **10,000 Gallon Gasoline and Diesel Underground Storage Tanks (USTs)** – two 10,000-gallon USTs: one containing gasoline and located immediately west of the Main Building, and the other containing diesel fuel located in the southwestern portion of the Site adjacent to the ditch. According to the 2004 RIR, the contents of the tanks were removed, and then the tanks were cleaned and abandoned in place.

- **Raw Material Storage Shed** – located south of the Main Building. Paints and other chemicals in drums and small containers were stored in this small shed.

- **Main Building Area** – located in the central portion of the Site. Once the drums had been incinerated and sand blasted, they were painted in one of three paint booths located

in this building. The 2004 RIR noted paint residues on the concrete floors and a floor/trench system within the building. No details on the construction of the floor drain system were available.

- **South Truck Trailer Area** – located in the southwestern portion of the Site adjacent to the drainage ditch. This unpaved area contained trailers that stored unprocessed drums. Drum handling and unloading was also conducted in this area.

- **Drainage Ditches** – located along the southern and eastern boundaries of the Site. NJDEP noted that a drainage system lead from the incinerator to the eastern drainage ditch. These ditches also received runoff from the entire Site that was discharged to Newark Bay approximately 2,300 feet east of the Site.

BBG000130, BBG000141, BBG000192

During remedial investigation activities, groundwater was encountered on Site at 1 to 1.5 feet below the ground surface, with a deeper aquifer at a depth of approximately 20 feet. During precipitation events, the groundwater table may extend in some places to the ground surface. According to NJDEP, potentiometric surface maps produced in the 1980s revealed little hydraulic gradient in the shallow water table. NJDEP concluded that it is likely that groundwater flow is directed towards the drainage ditches around the perimeter of the property. BBG000130, BBG000141, BBG000187

The 2004 RIR **"**indicated that data gaps still existed, particularly at the Drum Conveyor/De-heading Shop, Abandoned Truck Trailer Area, and the Drum Flip Operation Area where additional vertical and horizontal soil delineation was required. Also, dioxin impacts to soil and sediment had been documented, although the extent and magnitude have not been fully defined. During a 2001 investigation, six soil and three sediment samples were collected and analyzed for dioxin, and each of the six samples had toxic equivalent ("TEQ") dioxin values ranging between 0.011 parts per billion ("ppb") to 0.66 ppb. The 2004 RIR concluded that, due to the relatively widespread distribution of the samples and the fact that 6 out of the 6 samples tested positive for dioxin, this constituent could exist across the Site and extend to off-Site areas in the south ditch area. As a follow-up, the 2004 RIR proposed a dioxin "screening" assessment to cover the entire Site and ditch areas. BBG000181, BBG000183

On October 4, 2006, the City of Newark adopted a Resolution designating Glopak Corporation ("Glopak") as the redeveloper of the Site. Glopak, a manufacturer of plastic bags and recycler of plastics, is seeking "innocent purchaser" protection from Spill Act liability following completion of remediation of the Site and receipt of a No Further Action letter from NJDEP. BBG000184

According to NJDEP Case Manager, Stephen Kehayes, the Site is still in the remedial investigation phase, and soil sampling and analysis activities (including for dioxins) were conducted for the entire Site, including the drainage ditches, in the summer of 2007. As of the date of this DEF, NJDEP had not received the sampling results. BBG000176

Information concerning specific hazardous substances handled and/or present at the Site in connection with Site operations is presented in subsequent sections of this DEF.

SITE SOIL SAMPLING AND CONTAMINATION:

Soil sampling and analysis conducted in 1986, 1990, 2001 and 2004 indicated the following hazardous substances were detected in Site soils at the levels indicated:

Polychlorinated Dibenzo-p-Dioxins ("PCDDs"):

- 2,3,7,8-TCDD up to 0.06 ppb
- 1,2,3,7,8-PeCDD up to 0.013 ppb
- 1,2,3,4,7,8-HxCDD up to 0.024 ppb
- 1,2,3,6,7,8-HxCDD up to 0.25 ppb
- 1,2,3,7,8,9-HxCDD up to 0.11 ppb
- 1,2,3,4,6,7,8-HpCDD up to 8.7 ppb
- OCDD up to 85 ppb

Polychlorinated Dibenzofurans ("PCDFs"):

- 2,3,7,8-TCDF up to 0.075 ppb
- 1,2,3,7,8-PeCDF up to 0.019 ppb
- 2,3,4,7,8-PeCDF up to 0.042 ppb
- 1,2,3,4,7,8-HxCDF up to 0.12 ppb
- 1,2,3,6,7,8-HxCDF up to 0.028 ppb
- 1,2,3,7,8,9-HxCDF up to 0.0034 ppb
- 2,3,4,6,7,8-HxCDF up to 0.038 ppb
- 1,2,3,4,6,7,8-HpCDF up to 1.2 ppb
- 1,2,3,4,7,8,9-HpCDF up to 0.071 ppb
- OCDF up to 3.8 ppb

TEQ (non-PCB) up to 0.259 ppb

PCBs:

- Aroclor-1016 up to 22,000 ppb
- Aroclor-1242 up to 490 ppb
- Aroclor-1254 up to 180,000 ppb
- Aroclor-1260 up to 80,000 ppb
- Total PCBs up to 180,000 ppb

Chlorinated Herbicides:

- 2,4,5-Trichlorophenoxyacetic acid up to 55 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- 2,4-Dichlorophenoxyacetic acid up to 280 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- Dicamba up to 200 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- Silvex up to 260 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)

Organochlorine Pesticides:

- Aldrin up to 38,000 ppb
- Alpha-Benzene hexachloride ("-BHC") up to 160 ppb

- Beta-BHC up to 3,300 ppb
- Chlordane up to 150,000 ppb
- Delta-BHC up to 170 ppb
- Dieldrin up to 17,000 ppb
- Endosulfan sulfate up to 5.7 ppb
- Endrin up to 1,500 ppb
- Endrin aldehyde up to 2,600 ppb
- Endrin ketone up to 31 ppb
- Gamma-BHC ("Lindane") up to 75 ppb (USEPA Class II Pesticide Chemical associated with the formation of dioxin)
- Heptachlor epoxide up to 140 ppb
- Methoxychlor up to 1,500 ppb
- p,p'-DDD up to 28,000 ppb
- p,p'-DDE up to 8,200 ppb
- p,p'-DDT up to 41,000 ppb

Organics:

- Chlorobenzene up to 480,000 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- 1,2-Dichlorobenzene up to 70,000 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- 1,4-Dichlorobenzene up to 7,600 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Phenol up to 8,400 ppb (USEPA Class III Organic Chemical associated with the formation of dioxin)
- 1,2,4-Trichlorobenzene up to 98,000 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Acenaphthene up to 11,000 ppb
- Acetone up to 22,000 ppb
- Benzene up to 18,000 ppb
- Anthracene up to 53,000 ppb
- Benzo(a)anthracene up to 190,000 ppb
- Benzo(a)pyrene up to 130,000 ppb
- Benzo(b)fluoranthene up to 110,000 ppb
- Benzo(g,h,I)perylene up to 52,000 ppb
- Bis(2-chloroisopropyl)ether up to 67,000 ppb
- Bis(2-ethylhexyl)phthalate up to 1,600,000 ppb
- Butylbenzylphthalate up to 200,000 ppb
- 2-Butanone up to 7,800 ppb
- Cis-1,2-dichloroethene up to 77,000 ppb
- Chrysene up to 210,000 ppb
- 1,1-Dichloroethane up to 27,000 ppb
- 1,2-Dichloroethane up to 340,000 ppb
- Di-n-butylphthalate up to 320,000 ppb
- Di-n-octylphthalate up to 320,000 ppb
- Ethylbenzene up to 1,100,000 ppb
- Fluorene up to 220,000 ppb
- Isophorone up to 9,300 ppb

- Methylene chloride up to 1,200 ppb
- 2-Methylnaphthalene up to 78,000 ppb
- Naphthalene up to 120,000 ppb
- Phenanthrene up to 200,000 ppb
- Pyrene up to 390,000 ppb
- Styrene up to 60,000 ppb
- Toluene up to 12,000,000 ppb
- Total Organic Compounds ("TOC") up to 335,885,000 ppb
- Total Petroleum Hydrocarbon ("TPH") up to 150,157,000 ppb
- 1,1,1-Trichloroethane up to 120,000 ppb
- Trichloroethene up to 93,000 ppb
- Tetrachloroethene up to 220,000 ppb
- Xylene (s) up to 5,600,000 ppb

Inorganics:

- Aluminum up to 18,000 ppm
- Antimony up to 200 ppm
- Arsenic up to 69 ppm
- Barium up to 5,400 ppm
- Beryllium up to 1.9 ppm
- Cadmium up to 340 ppm
- Calcium up to 69,000 ppm
- Chromium up to 13,000 ppm
- Cobalt up to 130 ppm
- Copper up to 3,700 ppm
- Iron up to 410,000 ppm
- Lead up to 28,000 ppm
- Magnesium up to 28,000 ppm
- Manganese up to 29,000 ppm
- Mercury up to 94 ppm
- Nickel up to 830 ppm
- Zinc up to 15,000 ppm

BBG000111, BBG000130, BBG000181, BBG000183, BBG000223

GROUNDWATER SAMPLING AND CONTAMINATION:

Groundwater sampling events conducted in 1990 and 2001 reported the following hazardous substances present in the groundwater at the levels indicated:

- Chlorobenzene up to 440 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Benzene up to 1,500 ppb
- 2,4,6-Trichlorophenol up to 10 ppb
- Carbon disulfide up to 6 ppb
- Chlordane up to 0.55 ppb
- p,p'-DDD up to 0.23 ppb

- p,p'-DDT up to 0.64 ppb
- 4-Methyl-2-pentanone up to 980 ppb
- Toluene up to 1,900 ppb
- Xylenes (total) up to 1,760 ppb
- Aluminum up to 240,000 ppb
- Antimony up to 470 ppb
- Arsenic up to 940 ppb
- Barium up to 47,000 ppb
- Cadmium up to 700 ppb
- Chromium up to 32,000 ppb
- Copper up to 310,000 ppb
- Iron up to 3,200,000 ppb
- Lead up to 260,000 ppb
- Manganese up to 11,000 ppb
- Mercury up to 350 ppb
- Nickel up to 2,800 ppb
- Selenium up to 380 ppb
- Thallium up to 31 ppb
- Zinc up to 250,000 ppb

BBG000129, BBG000223

DRAINAGE DITCHES - - SEDIMENT SAMPLING AND CONTAMINATION:

Sediment samples collected in 1990 and 2001 from the drainage ditches, located along the east and south sides of the Site, contained the following hazardous substances at the levels indicated:

PCDDs:

- 2,3,7,8-TCDD up to 0.13 ppb
- 1,2,3,7,8-PeCDD up to 0.047 ppb
- 1,2,3,4,7,8-HxCDD up to 0.082 ppb
- 1,2,3,6,7,8-HxCDD up to 0.28 ppb
- 1,2,3,7,8,9-HxCDD up to 0.21 ppb
- 1,2,3,4,6,7,8-HpCDD up to 9.6 ppb
- OCDD up to 130 ppb

PCDFs:

- 2,3,7,8-TCDF up to 0.45 ppb
- 1,2,3,7,8-PeCDF up to 0.096 ppb
- 2,3,4,7,8-PeCDF up to 0.28 ppb
- 1,2,3,4,7,8-HxCDF up to 0.69 ppb
- 1,2,3,6,7,8-HxCDF up to 0.2 ppb
- 1,2,3,7,8,9-HxCDF up to 0.012 ppb
- 2,3,4,6,7,8-HxCDF up to 0.3 ppb
- 1,2,3,4,6,7,8-HpCDF up to 2.9 ppb
- 1,2,3,4,7,8,9-HpCDF up to 0.29 ppb
- OCDF up to 7.9 ppb

TEQ (non-PCB) up to 0.665 ppb

PCBs:

- Aroclor-1254 up to 29,000 ppb
- Aroclor-1260 up to 40,000 ppb
- Total PCBs up to 40,000 ppb

Chlorinated Herbicides:

- 2,4-Dichlorophenoxyacetic acid up to 280 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- Dicamba up to 160 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- Silvex up to 260 ppb (USEPA Class I Pesticide Chemical associated with the formation of dioxin)

Organochlorine Pesticides:

- Aldrin up to 290 ppb
- Chlordane up to 7,800 ppb
- Dieldrin up to 1,100 ppb
- Endrin up to 1,500 ppb
- Endrin aldehyde up to 840 ppb
- Lindane up to 97 ppb (USEPA Class II Pesticide Chemical associated with the formation of dioxin)
- Heptachlor epoxide up to 49 ppb
- p,p'-DDD up to 950 ppb
- p,p'-DDE up to 4,600 ppb
- p,p'-DDT up to 3,400 ppb

Organics:

- Chlorobenzene up to 6,700 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Phenol up to 4,800 ppb (USEPA Class III Organic Chemical associated with the formation of dioxin)
- Acetone up to 3,500 ppb
- Benzene up to 300 ppb
- Benzo(a)anthracene up to 1,700 ppb
- Benzo(a)pyrene up to 1,900 ppb
- Benzo(b)fluoranthene up to 2,200 ppb
- Benzo(k)fluoranthene up to 1,700 ppb
- Benzo(g,h,I)perylene up to 1,700 ppb
- Bis(2-ethylhexyl)phthalate up to 260,000 ppb
- Carbon disulfide up to 93,000 ppb
- Chrysene up to 3,800 ppb
- Di-n-butylphthalate up to 8,200 ppb
- Di-n-octylphthalate up to 33,000 ppb
- Ethylbenzene up to 700,000 ppb
- Fluoranthene up to 12,000 ppb
- Indeno(1,2,3-cd)pyrene up to 700 ppb

- Naphthalene up to 8,900 ppb
- Phenanthrene up to 18,000 ppb
- Pyrene up to 11,000 ppb
- Styrene up to 690,000 ppb
- Toluene up to 12,000,000 ppb
- TOC up to 120,000,000 ppb
- TPH up to 21,785,000 ppb
- Total Xylenes up to 3,560,000 ppb

Inorganics:

- Aluminum up to 14,000 ppm
- Antimony up to 340 ppm
- Arsenic up to 66 ppm
- Barium up to 6,300 ppm
- Cadmium up to 180 ppm
- Calcium up to 42,000 ppm
- Chromium up to 1,300 ppm
- Cobalt up to 2,400 ppm
- Copper up to 1,540 ppm
- Iron up to 190,000 ppm
- Lead up to 12,000 ppm
- Magnesium up to 17,000 ppm
- Manganese up to 1,300 ppm
- Mercury up to 13 ppm
- Nickel up to 260 ppm
- Zinc up to 21,000 ppm

BBG000130, BBG000181, BBG000223

DRAINAGE DITCHES - - SURFACE WATER SAMPLING AND CONTAMINATION:

Surface water samples collected by NJDEP personnel from the drainage ditches in 1990 contained the following hazardous substances at the levels indicated:

- Anthracene up to 6.2 ppb
- Bis(2-ethylhexyl)phthalate up to 3,000 ppb
- 2-Butanone up to 490 ppb
- Butylbenzyl phthalate up to 210 ppb
- Carbon disulfide up to 15 ppb
- Chrysene up to 8.2 ppb
- 1,1-Dichloroethane up to 65 ppb
- 1,2-Dichloroethene up to 14 ppb
- Di-n-butylphthalate up to 260 ppb
- Di-n-octylphthalate up to 19 ppb
- Ethylbenzene up to 100 ppb
- Fluorene up to 6 ppb
- Isophorone up to 89 ppb

- 4-Methyl-2-pentanone up to 190 ppb
- 2-Methylphenol up to 18 ppb
- 4-Methylphenol up to 73 ppb
- Naphthalene up to 55 ppb
- Phenanthrene up to 60 ppb
- Phenol up to 350 ppb
- Styrene up to 30 ppb
- TPH up to 93,000 ppb
- Toluene up to 1,400 ppb
- 1,1,1-Trichloroethane up to 270 ppb
- Xylenes up to 510 ppb
- Antimony up to 415 ppb
- Cadmium up to 339 ppb
- Chromium up to 3,420 ppb
- Copper up to 4,830 ppb
- Lead up to 31,200 ppb
- Mercury up to 18 ppb
- Nickel up to 355 ppb
- Zinc up to 13,000ppb

The surface water samples collected from the ditches were not analyzed for dioxins, pesticides, or herbicides. BBG000223

OFF-SITE SEDIMENTS SAMPLING AND CONTAMINATION:

Sediment sampling conducted in Newark Bay indicates contamination matching the hazardous substances reported to be on-Site. A review was conducted of the analytical results for three Newark Bay sediment samples, identified as SD001-RF3, SD002-FR3, and NB01SED052, located in the vicinity of the outfalls of ditches that drain the Site. The approximate locations of the Newark Bay sediment samples are identified on the following annotated aerial photograph:

Newark Bay Sediment Samples

Central Steel Drum Company, Inc.
704 Doremus Avenue
Newark, Essex County, New Jersey

Aerial Photograph Copyright 2008
Photo Source: Google Earth (Tele Atlas/Sanborn/DigitalGlobe)

All annotated locations are shown are approximations

A review of data from sampling of the surface sediment in Newark Bay Core SD001-RF3, located approximately 200 feet east of the outfall of the unnamed ditch, indicated the following concentrations of hazardous substances that also match those reported to be on-Site:

PCDDs:

- 2,3,7,8-TCDD up to 3.99 ppb
- 1,2,3,7,8-PeCDD up to 0.0057 ppb
- 1,2,3,4,7,8-HxCDD up to 0.00433 ppb
- 1,2,3,6,7,8-HxCDD up to 0.0215 ppb
- 1,2,3,7,8,9-HxCDD up to 0.0117 ppb
- 1,2,3,4,6,7,8-HpCDD up to 0.332 ppb
- OCDD up to 3.54 ppb

PCDFs:

- 2,3,7,8-TCDF up to 0.0208 ppb
- 1,2,3,7,8-PeCDF up to 0.0145 ppb
- 2,3,4,7,8-PeCDF up to 0.0321 ppb
- 1,2,3,4,7,8-HxCDF up to 0.121 ppb
- 1,2,3,6,7,8-HxCDF up to 0.0719 ppb
- 1,2,3,7,8,9-HxCDF up to 0.0062 ppb
- 2,3,4,6,7,8-HxCDF up to 0.0165 ppb
- 1,2,3,4,6,7,8-HpCDF up to 0.724 ppb
- 1,2,3,4,7,8,9-HpCDF up to 0.015 ppb
- OCDF up to 0.979 ppb

Dioxin TEQ up to 4.044 ppb
Total TEQ up to 4.06 ppb

Organochlorine Pesticides:

- 4,4’-DDE up to 21 ppb
- Total DDT up to 21 ppb
- Alpha-BHC up to 23 ppb
- Endrin ketone up to 18 ppb

Organics:

- 1,2,4-Trichlorobenzene up to 46 ppb
- 1,2-Dichlorobenzene up to 24 ppb
- 1,3-Dichlorobenzene up to 22 ppb
- 1,4-Dichlorobenzene up to 72 ppb
- 2-Methylnaphthalene up to 90 ppb
- 4-Chloroaniline up to 110 ppb
- 4-Methylphenol up to 670 ppb
- Acenaphthene up to 170 ppb
- Acenaphthylene up to 560 ppb
- Anthracene up to 1,100 ppb
- Benzo(a)anthracene up to 1,800 ppb
- Benzo(a)pyrene up to 1,900 ppb
- Benzo(b)fluoranthene up to 1,600 ppb

- Benzo(g,h,i)perylene up to 740 ppb
- Benzo(k)fluoranthene up to 1,800 ppb
- Bis(2-ethylhexyl)phthalate up to 9,500 ppb
- Chrysene up to 2,000 ppb
- Fluoranthene up to 3,700 ppb
- Naphthalene up to 300 ppb
- Phenanthrene up to 920 ppb
- Pyrene up to 2,900 ppb

Inorganics:

- Aluminum up to 10,000 ppm
- Arsenic up to 12.3 ppm
- Barium up to 128 ppm
- Beryllium up to 0.67 ppm
- Cadmium up to 2.4 ppm
- Calcium up to 7,310 ppm
- Chromium up to 148 ppm
- Cobalt up to 9.1 ppm
- Copper up to 136 ppm
- Iron up to 24,900 ppm
- Lead up to 162 ppm
- Magnesium up to 6,150 ppm
- Manganese up to 340 ppm
- Mercury up to 2.8 ppm
- Nickel up to 38.3 ppm
- Zinc up to 301 ppm

A review of data from sampling of the surface sediment in Newark Bay Core SD002-RF3, located approximately 225 feet southeast of the outfall of the unnamed ditch, indicated the following concentrations of hazardous substances that also match those reported to be on-Site:

PCDDs:

- 2,3,7,8-TCDD up to 0.207 ppb
- 1,2,3,7,8-PeCDD up to 0.00704 ppb
- 1,2,3,4,7,8-HxCDD up to 0.00615 ppb
- 1,2,3,6,7,8-HxCDD up to 0.0519 ppb
- 1,2,3,7,8,9-HxCDD up to 0.0241 ppb
- 1,2,3,4,6,7,8-HpCDD up to 0.702 ppb
- OCDD up to 6.14 ppb

PCDFs:

- 2,3,7,8-TCDF up to 0.0292 ppb
- 1,2,3,7,8-PeCDF up to 0.023 ppb
- 2,3,4,7,8-PeCDF up to 0.0479 ppb
- 1,2,3,4,7,8-HxCDF up to 0.219 ppb
- 1,2,3,6,7,8-HxCDF up to 0.146 ppb
- 1,2,3,7,8,9-HxCDF up to 0.0112 ppb
- 2,3,4,6,7,8-HxCDF up to 0.0246 ppb

- 1,2,3,4,6,7,8-HpCDF up to 1.57 ppb
- 1,2,3,4,7,8,9-HpCDF up to 0.0253 ppb
- OCDF up to 1.7 ppb

Dioxin TEQ up to 0.314 ppb
Total TEQ up to 0.347 ppb

Organochlorine Pesticides:

- 4,4'-DDE up to 20 ppb
- Alpha-BHC up to 19 ppb
- Total DDT up to 20 ppb

Organics:

- 1,2,4-Trichlorobenzene up to 50 ppb
- 1,2-Dichlorobenzene up to 46 ppb
- 1,3-Dichlorobenzene up to 35 ppb
- 1,4-Dichlorobenzene up to 100 ppb
- 2-Methylnaphthalene up to 200 ppb
- 4-Chloroaniline up to 280 ppb
- 4-Methylphenol up to 96 ppb
- Acenaphthene up to 150 ppb
- Acenaphthylene up to 490 ppb
- Anthracene up to 900 ppb
- Benzo(a)anthracene up to 1,500 ppb
- Benzo(a)pyrene up to 1,900 ppb
- Benzo(b)fluoranthene up to 1,500 ppb
- Benzo(g,h,i)perylene up to 1,100 ppb
- Benzo(k)fluoranthene up to 1,800 ppb
- Bis(2-ethylhexyl)phthalate up to 5,800 ppb
- Chrysene up to 2,000 ppb
- Fluoranthene up to 3,400 ppb
- Naphthalene up to 320 ppb
- Phenanthrene up to 860 ppb
- Pyrene up to 2,700 ppb

Inorganics:

- Aluminum up to 8,930 ppm
- Arsenic up to 10.7 ppm
- Barium up to 119 ppm
- Beryllium up to 0.63 ppm
- Cadmium up to 4.5 ppm
- Calcium up to 4,900 ppm
- Chromium up to 212 ppm
- Cobalt up to 9.4 ppm
- Copper up to 176 ppm
- Iron up to 20,800 ppm
- Lead up to 225 ppm
- Magnesium up to 5,310 ppm

- Manganese up to 288 ppm
- Mercury up to 5.5 ppm
- Nickel up to 44.2 ppm
- Zinc up to 437 ppm

A review of data from sampling of the core sediment in Newark Bay Core NB01SED052, located approximately 500 feet off shore, indicated the following concentrations of hazardous substances that also match those reported to be on-Site:

PCDDs:

- 2,3,7,8-TCDD up to 2.23 ppb
- 1,2,3,7,8-PeCDD up to 0.0262 ppb
- 1,2,3,4,7,8-HxCDD up to 0.0197 ppb
- 1,2,3,6,7,8-HxCDD up to 0.109 ppb
- 1,2,3,7,8,9-HxCDD up to 0.0579 ppb
- 1,2,3,4,6,7,8-HpCDD up to 1.42 ppb
- OCDD up to 14.1 ppb

PCDFs:

- 2,3,7,8-TCDF up to 0.0967 ppb
- 1,2,3,7,8-PeCDF up to 0.0537 ppb
- 2,3,4,7,8-PeCDF up to 0.133 ppb
- 1,2,3,4,7,8-HxCDF up to 0.339 ppb
- 1,2,3,6,7,8-HxCDF up to 0.0881 ppb
- 1,2,3,7,8,9-HxCDF up to 0.0182 ppb
- 2,3,4,6,7,8-HxCDF up to 0.0561 ppb
- 1,2,3,4,6,7,8-HpCDF up to 1.27 ppb
- 1,2,3,4,7,8,9-HpCDF up to 0.0487 ppb
- OCDF up to 2.49 ppb

PCBs:

- Aroclor-1242 up to 1,200 ppb
- Aroclor-1248 up to 5,200 ppb
- Aroclor-1254 up to 4,200 ppb
- Aroclor-1260 up to 1,300 ppb

Total TEQ up to 2.625 ppb

Chlorinated Herbicides:

- Silvex up to 14 ppb

Organochlorine Pesticides:

- 4,4’-DDE up to 140 ppb
- Total DDT up to 110 ppb
- Beta-BHC up to 2.7 ppb

Organics:

- Chlorobenzene up to 22 ppb

- 1,4-Dichlorobenzene up to 780 ppb
- Hexachlorobenzene up to 1,300 ppb
- Benzene up to 130 ppb
- Ethylbenzene up to 130 ppb
- 1,1,1-Trichloroethane up to 18 ppb
- 1,1-Dichloroethane up to 18 ppb
- 1,2-Dichloroethane up to 18 ppb
- 2-Methylnaphthalene up to 1,700 ppb
- 4-Chloroaniline up to 1,500 ppb
- 4-Methylphenol up to 1,300 ppb
- Acenapthene up to 1,100 ppb
- Acenaphthylene up to 810 ppb
- Anthracene up to 6,800 ppb
- Benzo(a)anthracene up to 3,900 ppb
- Benzo(a)pyrene up to 3,000 ppb
- Benzo(b)fluoranthene up to 3,700 ppb
- Benzo(g,h,i)perylene up to 1,900 ppb
- Benzo(k)fluoranthene up to 1,700 ppb
- Bis(2-ethylhexyl)phthalate up to 310,000 ppb
- Chrysene up to 4,500 ppb
- Di-n-octylthphalate up to10,000 ppb
- Fluoranthene up to 9,200 ppb
- Naphthalene up to 10,000 ppb
- Phenanthrene up to 7,300 ppb
- Phenol up to 1,300 ppb
- Pyrene up to 8,400 ppb

Inorganics:

- Aluminum up to 21,000 ppm
- Arsenic up to 53 ppm
- Barium up to 287 ppm
- Beryllium up to 1.2 ppm
- Cadmium up to 13.5 ppm
- Calcium up to 11,300 ppm
- Chromium up to 749 ppm
- Cobalt up to 15.2 ppm
- Copper up to 434 ppm
- Iron up to 37,800 ppm
- Lead up to 452 ppm
- Magnesium up to 9,560 ppm
- Manganese up to 528 ppm
- Mercury up to 16.2 ppm
- Nickel up to 78 ppm
- Zinc up to 985 ppm

PERMITS (provide dates)**:**

NPDES:

According to the NJPDES Permittee Database, CSD was issued NJPDES Permit No. NJ0067199, effective July 1, 1995 and expiration June 30, 1998. BBE000006

During a September 1990 Site inspection, NJDEP informed CSD that an NJPDES permit was required for the wash water from the drum cleaning operation and waste residue around the incineration area that were "ultimately discharged (via an unnamed ditch to Newark Bay) to surface waters of the State." NJDEP did not cite CSD for failure to obtain a permit, but rather issued a letter in November 1990 directing then to obtain a permit or enforcement action, including the imposition of penalties, may result. CSD filed an application for an NJPDES permit to discharge to surface water in April 1991. In 1992, analysis of Site stormwater runoff indicated the presence of copper (8.1 ppb), zinc (81 ppb), boron (110 ppb), iron (670 ppb), manganese (213 ppb), molybdenum (42 ppb), magnesium (12,000 ppb), and titanium (10 ppb). BBD000004, BBD000005, BBE000002, BBE000003

POTW (pretreatment):

No information is available at this time.

NEXUS TO NEWARK BAY STUDY AREA (describe in detail; cite to supporting documentation; date or time period of disposal; list CERCLA hazardous substances and volume, if known):

Direct (e.g. pipe, outfall, spill):

The topography of the Site is relatively flat with drainage ditches to the east and south. Catch basins on the eastern portion of the Site reportedly discharged to the drainage ditch along the east side of the Site. Wetlands are present in the southern portion of the Site, and a tidal influenced drainage ditch is located to the south of the Site. Although the southern drainage ditch is outside the Site property boundaries, NJDEP reported that it contained rotting drums and received waste liquids from Site runoff. The drainage ditch discharges into Newark Bay approximately 2,300 feet east of the Site. BBG000141, BBG000192

NJDEP noted that on the south end of the Site was an existing wetland where drums were observed in the past. Also a tide-influenced drainage ditch in the wetland emptied into Newark Bay. It was believed that wastes were discharged into this ditch. Site drainage, including stormwater, was released via the drainage ditch system to Newark Bay. BBG000133

In July 1981 after responding to a burning rail tank car in Newark, the EPA/TAT response team was escorted to the nearby CSD site by a representative of the Newark Fire Department. The following observations were reported:

"The facility was extremely disreputable and housekeeping non-

> existant (sic). The site…is virtually covered with pools of oil and various chemicals. The area is all filled marsh and is not covered by concrete or asphalt. Along the back of the site, oil and chemicals were observed flowing into adjacent ditches and wetlands. The number of drums on the site is unknown, however…would estimate the number to be in the tens of thousands, many of which are leaking."

BBG000120

In a February 1982 Hazardous Waste Investigation report, NJDEP observed an "[o]utcropping from the drainage ditch banks contained old rusted drums, plastic material, wood, and various colored sludges (i.e., yellow, white, blue, etc.)." BBG000124

In a 1982 letter to NJDEP, USEPA stated that "[t]he company disposed of hazardous waste ash on the property in the past, and sampling has confirmed the presence of hazardous waste in the…adjoining polluted creek. BBG000118

In 1987, NJDEP issued CSD a Notice of Violation for the discharge of hazardous substances, specifically massive surface water contamination as a direct result of poor housekeeping. BBG000076

The 1990 Remedial Investigation Phase I workplan noted that waste residues and runoff from the drum flip operations area drained to a concrete pit, and that "CSD also indicated…[w]hen flooding occurs, stormwater is pumped out of the pit and discharged toward the ditch to the east." BBG000227

In July 1990, an inspector for the Suburban Regional Health Commission informed NJDEP that he had been to CSD and the following observations were reported:

> "[t]he wash curtain that washes out hazardous waste, oil, and paint sludges goes out to the surface water….they spill the waste onto the ground and [it] has built up a layer of pollution that is leaching into the bay."

BBG000218

In September 1990, NJDEP issued CSD a Notice of Violation for an unpermitted discharge to the waters of the State. The inspector specifically noted red paint spilled around the incinerator area ends up in the surface waters of the State. BBG000069

NJDEP stated in the 1993 JCO that "…CSD's drum emptying and transfer operation results in the dumping, spillage and discharge of hundreds, if not thousands, of gallons of drum residues each day." BBG000167

Sanitary Sewer (provide name and location of Combined Sewer Outfall ("CSO"); details regarding CSO overflows and dates):

An on-Site septic disposal system was used for the discharge/disposal of sanitary waste. BBD000004, BBG000227

Storm Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

Stormwater from the Site drains to Newark Bay via drainage ditches located along the eastern and southern boundaries of the Site. BBG000133

Runoff:

The Site is located within the 100-year floodplain and in an area described as a coastal high hazard area and riverine floodway. The topography of the Site is relatively flat with drainage ditches to the east and south. Catch basins on the eastern portion of the Site reportedly discharged to the drainage ditch along the east side of the Site. Wetlands are present in the southern portion of the Site, and a tide-influenced drainage ditch is located to the south of the Site. Although the southern drainage ditch is outside the Site property boundaries, NJDEP reported that it contained rotting drums and received waste liquids Site runoff. The drainage ditch discharges into Newark Bay approximately 2,300 feet east of the Site. BBG000111, BBG000141, BBG000192

In a 1980 NJDEP Hazardous Waste Investigation report, the assistant manager of CSD stated:

> "the company uses the (incinerator) ash to fill pot holes on the company's grounds. It was also used as a fill material at the rear of the property…. since this area was low and flooding occurs often, the rear of the property was being filled in to prevent this from happening in the future."

BBG000032

The incinerator residue (ash) was analyzed in the 1981 and found to contain arsenic (2.86 ppm), barium (610 ppm), cadmium (48.3 ppm), chromium (870 ppm), copper (6,165 ppm), lead (9,000 ppm) mercury (0.093 ppm), molybdenum (922 ppm), nickel (120 ppm, selenium (0.093 ppm), and silver (0.083 ppm). BBG000120

During a 1981 joint USEPA and NJDEP inspection of the Site, inspectors noted "that there were random open drums filled with sludge matter and also drums with more than an inch of an adhesive or resin material inside. Some drums were found laying on the ground in disarray with resinous material spilling from it." BBG000037

A 1982 NJDEP inspection noted approximately 20-30 full drums and some leaking onto the ground. BBG000124

In a February 1982 Hazardous Waste Investigation report, NJDEP noted:

> "contaminated run-off with an oily sheen was observed flowing in the drainage ditch from under the gravel on the parking lot. A heavy silver oil sheen was noted on most of the water surface in this ditch and the water had a grayish-red tint to it

BBG000124

NJDEP documented in the February 1982 Hazardous Waste Investigation report that housekeeping throughout the facility was very poor, specifically noting:

- Spillage of white sludge on soil in drum staging area in western section of facility;
- Purple liquid, approximately 40'x 40', on soil in the staging area;
- Multi-colored sludges and blue liquid on soil next to chain conveyor for incinerator;
- Pink and white spills on soil east of incinerator;
- Drum spraying a red liquid from a leak onto soil next to incinerator;
- Pile of incinerator ash stored on soil next to incinerator;
- Yellow and white solid material dumped in area next to drainage ditch where it empties into the stream;
- Stream bed containing garbage and sludges, and sheen on water
- Drums in stream at the southeast section of the facility;
- Purple soil near stream in southeast section of the facility; and
- Contaminated run-off with sheen running from southwest section of the property into the stream.

BBG000124

In 1983, NJDEP personnel noted "…drums were piled on their sides from 4 to 10 drums high. Their residual contents were spilled on to the ground…." BBG000111

In a 1983 memo, NJDEP documented:

> "…concern in this facility is with the run-off from the drum storage areas and the incineration process. Spillages occur in the drum storage areas and along the chain conveyor as the drum is turned upside down for incineration. Both areas are open and subject to rain. All contaminated rain water is washed into the ditch that runs along both sides at the rear of the property. Inspection of this drainage ditch revealed half-buried, rotting drums, and multi-colored liquid due to chemical contamination."

BBG000111

NJDEP performed a Preliminary Assessment of the Site in March 1985 and noted "…numerous drums were observed leaking, and the resulting spills were observed collecting in a runoff with an oily sheen that was flowing from the site directly into a drainage ditch which discharges directly into Newark Bay." BBG000196

The 1985 USEPA Potential Hazardous Waste Site Preliminary Assessment reported "[c]ontaminated runoff with an oily sheen flowing into a drainage ditch then into Newark Bay was observed. The banks of the ditch contained rusted drums and various colored sludges." BBG000111

A 1985 USEPA Preliminary Assessment reported "[s]oil contaminated due to poor handling and storage of drums was observed. Contents of some drums were observed to be leaking directly onto the ground." BBG000111

A 1985 USEPA Preliminary Assessment reported that "NJDEP inspections conducted at this site during 1980-83 revealed ground water, surface water, soil, and air contamination at this facility." BBG000111

Historically, there were numerous solid and liquid drum discharge locations throughout the Site, and ash waste disposal practices facilitated the broadcast of hazardous incinerator ash throughout the Site. BBG000129

Hazardous substances detected in on-Site soils include (without limitation) the following:

- Dioxin (PCDDs and PCDFs)
- PCBs
- 2,4,5-Trichlorophenoxyacetic acid (USEPA Class I Pesticide Chemical associated with the formation of dioxins)
- 2,4-Dichlorophenoxyacetic acid (USEPA Class I Pesticide Chemical associated with the formation of dioxin)
- Dicamba
- Silvex
- Aldrin
- Dieldrin
- Lindane (USEPA Class II Pesticide Chemical associated with the formation of dioxin)
- pp'-DDD
- pp'-DDE
- pp'-DDT
- Chlorobenzene (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Phenol (USEPA Class III Organic Chemical associated with the formation of dioxin)
- 1,2,4-Trichlorobenzene (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Benzene
- 1,1-Dichloroethene
- Ethylbenzene
- Methylene chloride
- Tetrachloroethene
- Toluene
- Trichloroethene
- Total xylenes
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate
- Butylbenzylphthalate
- Chrysene
- Di-n-octylphthalate
- Naphthalene

- Antimony
- Arsenic
- Barium
- Cadmium
- Copper
- Lead
- Mercury
- Nickel
- Zinc

BBG000130

Groundwater:

During remedial investigation activities, groundwater was encountered on Site at 1 to 1.5 feet below the ground surface, with a deeper aquifer at a depth of approximately 20 feet. During precipitation events, the groundwater table may extend in some places to the ground surface. According to NJDEP, potentiometric surface maps produced in the 1980s revealed little hydraulic gradient in the shallow water table. NJDEP concluded that it is likely that groundwater flow is directed towards the drainage ditches around the perimeter of the property. BBG000130, BBG000141, BBG000187

As stated above, a 1985 USEPA Preliminary Assessment reported that "NJDEP inspections conducted at this site during 1980-83 revealed ground water, surface water, soil, and air contamination at this facility." BBG000111

1985 USEPA Preliminary Assessment concluded that "[d]ue to drum spills, disposal of hazardous waste on an unprotected concrete slab and poor housekeeping practices, there is potential for ground water contamination. Depth to ground water approx. 30 in." BBG000111

The following hazardous substances were detected in groundwater samples above NJDEP Groundwater Quality Criteria:

- Chlordane
- p,p'-DDD
- p,p'-DDT
- Chlorobenzene (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Benzene
- Xylenes
- Aluminum
- Antimony
- Arsenic
- Barium
- Cadmium
- Chromium
- Iron
- Lead

- Manganese
- Mercury
- Nickel
- Selenium
- Thallium
- Zinc

BBG000129, BBG000130, BBG000223

POTENTIAL NEXUS TO NEWARK BAY STUDY AREA (describe in detail; cite to supporting documentation; list CERCLA hazardous substances; and volume, if known):

Direct (e.g. pipe, outfall, spill):

A 1987 memo from the Executive Director of the Suburban Regional Health Commission to NJDEP stated that the "site is approximately 2000′ from Newark Bay. Evidence of gross dumping of hazardous materials indicates company may be a significant contributor to Bay pollution." BBG000090

Sanitary Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

No additional information is available at this time.

Storm Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

1985 USEPA Preliminary Assessment concluded the "[p]otential exists [of heavy rains causing] the overflow of spilled chemicals from Central Steel Drum's property into sewers or storm drains." BBG000111

Runoff:

No additional information is available at this time.

Groundwater:

No additional information is available at this time.

REFERENCES

TAB NO.	BATES NO.	DATE	DESCRIPTION
1	BBD000004	09/13/91	Letter from J M Sorge to NJDEP Re: NJDEP/DSW Permit Application
2	BBD000005	04/17/92	Letter from J M Sorge to NJDEP Re: NJDEP/DSW Permit Application
3	BBE000002	05/30/91	Letter from NJDEP to CSD Re: Receipt of April 1991 NJPDES Permit Application

4	BBE000003	11/05/90	Letter from NJDEP to CSD Re: NJPDES Permit Requirement
5	BBE000006	12/31/00	NJPDES Archive Database (excerpt)
6	BBG000022	06/15/98	Memorandum of Agreement by Rule Between NJDEP and the City of Newark
7	BBG000032	01/29/80	NJDEP Hazardous Waste Investigation
8	BBG000037	12/07/81	EPA/NJDEP Joint Inspection Report
9	BBG000054	05/10/94	Letter from J M Sorge to NJDEP Re: Progress Report No. 2
10	BBG000069	09/17/90	NJDEP Investigation Memorandum
11	BBG000076	04/24/87	NJDEP Notice of Violation
12	BBG000090	12/15/87	NJDEP Memorandum Re: 1987 Memos from Suburban Regional Health Commission
13	BBG000106	09/21/88	NDEP Internal Memo Re: Case Transfer
14	BBG000111	07/25/86	*Final Draft Site Inspection Report and Hazard Ranking System Model* prepared by NUS Corp.
15	BBG000118	12/02/82	Letter from USEPA to NJDEP Re: Contamination at CSD
16	BBG000120	09/18/81	Memo from Ecology & Environment, Inc. to USEPA Re: July 28, 1981 Railcar Fire in Newark and Visit to CSD Site
17	BBG000124	02/03/82	NJDEP Hazardous Waste Investigation
18	BBG000129	06/01/04	*Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary* prepared by URS Corp.
19	BBG000130	06/01/04	*Revised Soil Remedial Investigation Results Summary Report* prepared by URS Corp. (excerpts)
20	BBG000133	Undated	NJ Division of Law, Hazardous Site Litigation Section, SOL Referral (marked "Confidential: Attorney-Client Privileged," Source: NJDEP files June 2007) (incomplete)
21	BBG000141	09/22/99	NJDEP Internal Memo Re: Remedial Investigation Workplan
22	BBG000147	05/1997	EPA Expedited Removal Assessment Criteria
23	BBG000154	05/13/98	USEPA Letter to NJDEP Re: Removal Action Completed
24	BBG000155	12/15/97	Letter from URS Greiner to NJDEP Re: Revised Grant Application
25	BBG000156	12/29/95	NJ Division of Law fax to NJDEP Re: Deed dated 10/26/89
26	BBG000167	01/07/93	Superior Court of New Jersey Law Division-Essex County Docket No. C-152-91; Civil Action, Judicial Consent Order between the NJDEPE and Central Steel Drum
27	BBG000174	03/28/80	Notice of Prosecution issued by NJDEP
28	BBG000176	03/28/07	Letter from ARCADIS to NJDEP Re: Remediation Investigation Work Plan
29	BBG000181	06/07/06	Response to NJDEP Comment Letter dated June 24, 2004 prepared by URS Corp.

30	BBG000183	02/04/05	Scope of Work for Remedial Investigation prepared by URS Corp.
31	BBG000184	03/14/07	City of Newark/Glopak Inc. Brownfield Redevelopment Project Briefing
32	BBG000187	11/07/03	NJDEP Internal Memorandum Re: Remedial Investigation Report
33	BBG000188	Undated	Synopsis of CSD/Newark MOA Case
34	BBG000192	03/21/05	Addendum Scope of Work for Remedial Investigation prepared by URS Corp.
35	BBG000195	07/16/90	NJDEP Internal Confidential Memorandum Re: Central Steel Drum (Source: NJDEP files June 2007)
36	BBG000196	06/06/91	NJDEP v. CSD et al; Superior Court of New Jersey Chancery Division-Essex County; Civil Action, Verified Complaint
37	BBG000218	07/18/90	NJDEP Report of Phone Call or Visit
38	BBG000222	Undated	Dore Realty Co. v. CSD et al; Superior Court of New Jersey Essex County: Chancery Division; Civil Action, Brief
39	BBG000223	10/31/90	Memo from NJDAG to NJDEP Re: CSD 1990 Sampling Results (marked "Confidential Memorandum," Source: NJDEP files June 2007)
40	BBG000225	02/10/94	Superior Court of New Jersey Law Division-Essex County Docket No. C-152-91; Civil Action, Amendment to January 8, 1993 Judicial Consent Order between the NJDEPE and Central Steel Drum
41	BBG000227	07/1990	*Remedial Investigation Phase I* prepared by J M Sorge, Inc.
42	BBH000001	11/26/97	Letter from USEPA to Addressees Re: Request for Information Pursuant to Section 104(e) of CERCLA
43	BBH000002	01/12/93	In the Matter of: Central Steel Drum Company, Inc.; United States Bankruptcy Court for the District of New Jersey Case No. 93-20194 WFT; Oder to Show Cause in Proceedings for a Reorganization Under Chapter 11 of the Bankruptcy Code
44	BBH000003	07/11/96	Memo from NJ Division of Law to NJDEP Re: CSD Investigation Summary
45	BBH000004	01/16/98	USEPA 104(e) Response for Akzo Nobel Coatings Inc. (excerpts)
46	BBH000005	01/19/98	USEPA 104(e) Response for American Inks and Coatings Corp. (excerpts)
47	BBH000006	01/21/98	USEPA 104(e) Response for Armstrong World Industries, Inc. (excerpts)
48	BBH000007	12/30/97	USEPA 104(e) Response for American National Can Company (excerpts)
49	BBH000008	01/20/98	USEPA 104(e) Response for APOLAN International (excerpts)
50	BBH000009	01/29/08	USEPA 104(e) Response for BASF Corporation (excerpts)

51	BBH000010	01/15/98	USEPA 104(e) Response for Borden & Remington Corp. (excerpts)
52	BBH000011	02/02/98	USEPA 104(e) Response for Borden Chemical, Inc. (excerpts)
53	BBH000012	01/20/98	USEPA 104(e) Response for Chiyoda America Inc. (excerpts)
54	BBH000013	01/21/98	USEPA 104(e) Response for Ciba Specialty Chemicals Corporation (excerpts)
55	BBH000014	02/18/98	USEPA 104(e) Response for Congoleum Corporation (excerpts)
56	BBH000015	01/30/98	USEPA 104(e) Response for Del Val Ink & Color, Inc. (excerpts)
57	BBH000016	01/08/98	USEPA 104(e) Response for Houghton International Inc. (excerpts)
58	BBH000017	01/13/98	USEPA 104(e) Response for Flint Ink Corporation (excerpts)
59	BBH000018	12/23/97	USEPA 104(e) Response for Fort James Corporation (excerpts)
60	BBH000019	12/11/97	USEPA 104(e) Response for Mace Adhesives and Coatings Co., Inc. (excerpts)
61	BBH000020	01/19/98	USEPA 104(e) Response for INX International Ink Co. (excerpts)
62	BBH000021	01/29/98	USEPA 104(e) Response for 3M Company (excerpts)
63	BBH000022	06/09/98	USEPA 104(e) Response for Sun Chemical Corporation (excerpts)
64	BBH000023	02/20/98	USEPA 104(e) Response for Lilly Industries, Inc. (excerpts)
65	BBH000024	01/28/98	USEPA 104(e) Response for Vanderbilt Chemical Corporation (excerpts) (portions stamped "Confidential," Source: EPA Region II files January 2008)
66	BBI000001	3/15/08	Hoovers report for Akzo Nobel Inc., www.hoovers.com
67	BBI000002	3/17/08	Online Sources for American Inks & Coating Corp.
68	BBI000003	3/12/08	Hoovers report for Armstrong World Industries, Inc., www.hoovers.com
69	BBI000004		Hoovers report for American National Can Group, Inc., www.hoovers.com
70	BBI000005	3/15/08	Website: APOLAN International, www.apolan.com
71	BBI000006	3/17/08	Hoovers report for BASF Corp., www.hoovers.com
72	BBI000007	3/17/08	Website: Borden & Remington Corp., www.boremco.com
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75	BBI000010	3/15/08	Hoovers report for Ciba Specialty Chemicals Holding Inc., www.hoovers.com

76	BBI000011	3/12/08	Hoovers report for Congoleum Corporation, www.hoovers.com
77	BBI000012	3/15/08	Website: Del Val Ink and Color Incorporated, www.dvink.com
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81	BBI000016	3/17/08	Website: Mace Adhesives & Coatings Co., Inc., www.maceco.com
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89	BBJ000002	03/31/56	Drainage Map Section, Essex County Mosquito Extermination Commission, March 31, 1956